




Smart-building sensor technology

Solutions that offer performance,
flexibility and reliability



Technology that makes buildings talk



“Our mission is to continually create better, more efficient smart technology for our customers, now and in the future.”

Peter Burbidge, Managing Director, Pressac

A technology partner you can trust

Today's connected buildings give businesses the power to create safer, healthier environments and achieve new levels of operational efficiency. But, in a relatively new market, and with so many options to choose from, the challenge lies in choosing the right hardware and systems.

As a trusted technology partner to some of the world's leading businesses, we understand you need a cost-effective solution without compromising on performance and reliability. And because your needs are likely to evolve along with your business, our solutions are scalable and highly flexible.



Wireless, energy-efficient sensor technology

Our sensors are wireless and ultra-low power, making them easy to install and very low maintenance. They either use technology to harvest their power from the surrounding environment or batteries that typically last over 5 years.

We use EnOcean's internationally approved wireless protocol which is designed for reliable transmission in systems with numerous sensors, such as inside a commercial building. EnOcean's wireless protocol offers three license-free frequencies:

- 868 MHz frequency for Europe and other countries adopting RED
- 902 MHz frequency for USA (FCC specification) and Canada (IC specification)
- 928 MHz frequency for Japan (ARIB specification)



Interoperable, secure, flexible technology

Because your needs are likely to evolve along with your business, our solutions are scalable and highly flexible:

- Our technology is platform agnostic, so the data from our sensors can be integrated easily with any software, system or IoT platform
- Data is sent wirelessly and securely – using AES-128 encryption – from our sensors to any number of receivers
- We can also offer bespoke sensor design and manufacturing, so however specific your requirements we can work with you to find the best solution



Highest levels of quality and compliance

Drawing on over 60 years' experience in electronic product design, plus our own 5,000 sqm UK manufacturing and testing facility, allows us to manage every stage of development and manufacture.

- All our products are fully tested internally to ensure they are fit for purpose, reliable, robust and compliant with safety and industry standards. Then they're approved by third-party test bodies, meaning no product will leave our premises unless we're completely confident it meets your needs
- All our production capabilities comply with the highest quality and environmental standards – ISO 9001 and ISO 14001 certification – and global regulatory requirements

Our sensor range

Our small, wireless, low-energy sensors detect, measure and monitor your environment and assets, all in real-time.

Environmental monitoring sensors

Environmental sensors let you monitor conditions in each room or zone within a building, in real time. They help you maintain comfortable conditions and use energy more efficiently.

Our environmental sensors measure carbon dioxide (CO₂), ambient temperature and relative humidity.



CO₂, temperature and humidity sensor

- Reports CO₂, ambient temperature and relative humidity every 5 to 15 minutes
- Measurement range:
CO₂ between 0–2550PPM (+/-125PPM)
Temperature 0–51°C (+/- 0.5°C)
Humidity 0–100% RH (+/- 5%)
- Self-powered using ambient room light, with a back-up battery for low-light conditions
- Dimensions: 115 x 80 x 35 mm (approx)



Temperature and humidity sensor

- Reports ambient temperature every 100 seconds if the temperature changes by more than 0.5°C or humidity changes by more than 2%, otherwise updates every 15 minutes
- Measurement range:
Temperature 0–40°C (+/- 0.5°C between 17–27°C otherwise +/- 1°C)
Humidity 0–100% R.H (+/- 5% between 30–70%)
- Self-powered using ambient room light or powered with an energy-efficient battery for low-light environments
- Dimensions: 76.5 x 28 x 17.5 mm (approx)



Temperature sensor

- Reports ambient temperature every 100 seconds if the temperature changes by more than 0.5°C, otherwise updates every 15 minutes
- Measurement range:
0–40°C (+/- 0.5°C between 17–27°C otherwise +/- 1°C)
- Self-powered using ambient room light or powered with an energy-efficient battery for low-light environments
- Dimensions: 76.5 x 28 x 17.5 mm (approx)

Workspace occupancy sensors

Desk occupancy sensors detect and monitor the presence of people, in real time. They let you see live availability and understand how desks, rooms and spaces are being used.



- Stick to the underside of a desk or table
- Passive infrared (PIR) sensor detects presence within 0.5 meters
- Status updates can be configured between 10 minutes and 5 hours
- Batteries typically last 3–5 years, plus USB-powered variant
- Absence time out can be configured between 2 and 30 minutes
- Dimensions: 93 x 65 x 28 mm (approx)

Door and window sensors

Contact sensors let you automatically detect open or closed doors and windows around your building, including doors on cupboards, cabinets and fridges.



- Use magnetic fields to detect open/close status
- Reports instant open/close changes, otherwise updates every 15 minutes
- Self-powered using ambient room light, with an optional back-up battery for low-light conditions
- Dimensions: 76.5 x 28 x 17.5 mm (approx)

Dry contact sensors

Dry contact sensors let you automatically detect the live status of any equipment or unit that has a volt-free, dry contact output, such as UPS status, security systems, fire alarms or air conditioning units.



- Push-wire connection of two wires
- Reports instant open/close changes, otherwise updates every 15 minutes
- Self-powered using ambient room light, with an optional back-up battery for low-light conditions
- Dimensions: 76.5 x 28 x 17.5 mm (approx)

Industrial temperature sensors

Industrial temperature sensors allow you to measure and monitor ambient, surface or water conditions in a room, machine or around the building, in real time. This allows you to maintain optimum conditions and improve efficiency.

Our three-channel temperature sensors measure temperature at up to three different points, and can be used for water, air or surface temperature measurements.



- Accepts up to three industry-standard PT1000 probes
- Measures and reports temperature: -20–100°C
- Battery powered
- Dimensions: 110 x 80 x 66 mm (approx)
- IP67 rated so it can be used near water

Energy monitoring sensors

Energy monitoring sensors measure electrical consumption at a circuit, zone or machine level. They allow you to see granular real-time energy use, track use over time, and monitor and control equipment.

Our small, wireless current sensors (CT clamps) simply clip around a cable to measure and report the alternating current (AC). They can easily be fitted inside a machinery panel, distribution panel or other suitable location.



Current sensor: one channel

- Measures current (50Hz or 60Hz) every 30 seconds in a single channel
- Wireless and self-powered - simply clip around cables with no interruption to electrical supply
- Measurement ranges:
1A–60A (+/- 0.1A or 2%*)
2A–200A (+/- 0.1A or 2.5%*)
*Whichever is greater



Current sensor: three channels

- Measures current (50Hz or 60Hz) every 30 seconds in three separate channels
- Wireless and self-powered - simply clip around cables with no interruption to electrical supply
- Measurement ranges:
1A–60A (+/- 0.1A or 2%*)
2A–200A (+/- 0.1A or 2.5%*)
2A–600A (+/- 1A or 3%*)
*Whichever is greater

Our receiver range

Our wireless receivers connect sensors to the network, enabling them to talk to applications, to each other, and to you. Automatically and in real time.

Smart gateway

Our smart gateway receives sensor data, converts it into IoT industry-standard MQTT protocol and makes it available locally or via the cloud, so you can easily integrate it into existing software or platforms.



- Transmits data via a wired ethernet cable, or wirelessly via WiFi or LTE (4G). Failovers can be configured to automatically switch to a backup if needed
- Sends sensor data to any user defined local or cloud-based MQTT broker
- Ready-made connections with: IBM Watson, Microsoft Azure, AWS IoT Core* and Google Cloud IoT platforms*

*Available soon

Smart repeater

Our smart repeater is a cost-effective way to increase sensors' range, allowing them to transmit data over a larger distance or where obstructions occur.



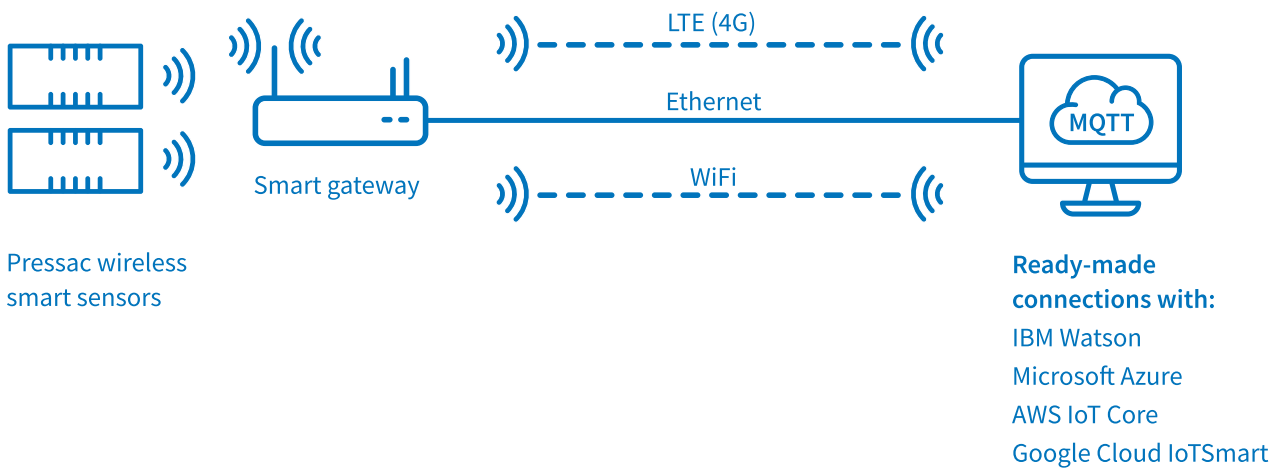
- Extend wireless range of sensors up to 90m, depending on the configuration of a building.
- Select which sensors to repeat to minimise unnecessary data being transmitted and maximise available bandwidth
- Powered via USB

How it works

Data is sent wirelessly and securely from our sensors to any number of receivers. Because our technology is platform agnostic, the data from our sensors can be used in any way you need.

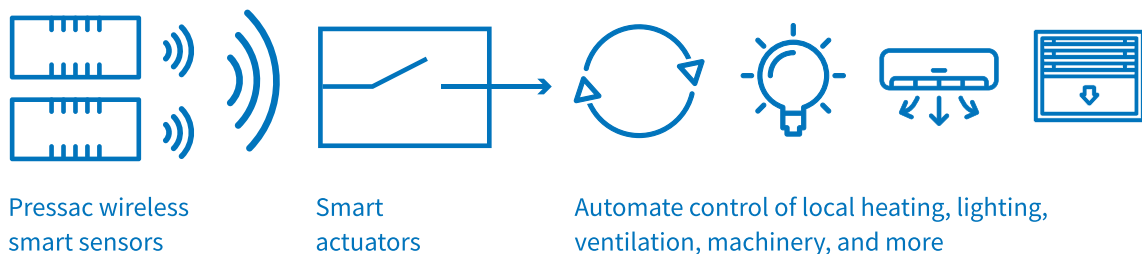
Integrate data into any software or platform

Our smart gateways convert sensor data to industry-standard MQTT protocol and makes it available locally or via the cloud, so you can integrate sensor data easily into any software or IoT platform.



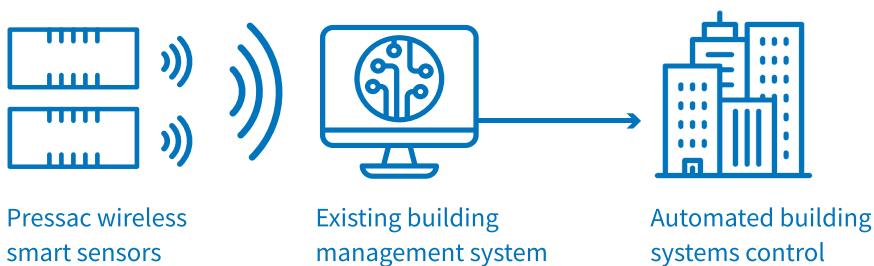
Connect directly to smart devices

Our sensors and actuators interact directly, allowing you to automate local control systems.



Feed directly into existing building management systems

Sensor data can be used in systems with protocols such as Modbus, letting you monitor, control and report within an existing building management system.





We design and manufacture the technology that makes buildings talk. And you'll find our technology in virtually every home and workplace in the UK.



Our approach

The service we provide has four main stages:

Design: Our experts will work with you to understand your objectives and identify the system capabilities you need. We'll then recommend a system that meets your current and likely future requirements, whether that's off the shelf, bespoke, or delivered in partnership with another company.

Planning: A reliable system starts with a sound understanding of your workspace, including layout, dimensions, building materials, and the location of firewalls, stairwells and lifts – all of which can impact on signal strength. We'll use floorplans to work out the optimum positioning of sensors, repeaters and gateways.

Installation: Our sensors use wireless technology so they simply stick or click in place with no need for cables. If you need support, our installers are experts in our products and are trained in radio planning and electrical safety. They can visit your premises to ensure everything's set up correctly first time, or they can advise your own installation team.*

Ongoing support: We're continually working to refine our solutions, which means you keep on getting the very best performance and reliability. We can provide product maintenance and testing, and support with future product upgrades and integrations.

*Currently UK only.



Pricing

We partner with our customers to help deliver scalable, cost-effective, compliant solutions. Our products and services are priced based on volume and we can manufacture in bulk and ship them as needed worldwide.

As well as off-the-shelf solutions, we also offer bespoke manufacturing in high volumes. With in-house design, development and quality-assurance experts, plus our own high-tech UK manufacturing facility, we can manage the full lifecycle of product creation, from design and prototyping to manufacture and distribution.



Ready to talk?

Our technical experts will work with you to identify a suitable proof of concept and support you to correctly install the sensing system and access the data. Once integration is successful, we can work with you to roll-out across your own or your customer's business.

Pressac smart building and connected technology

Pressac design and manufacture the technology that makes buildings talk. We help millions of businesses and consumers worldwide to connect their building and equipment to the network, enabling them to talk to applications, to each other, and to you. All in real time.

As a trusted partner to some of the world's leading companies, we've been designing and manufacturing smart technology for over 60 years. As well as quality-assured off-the-shelf solutions, we also offer bespoke manufacturing in high volumes. With in-house design, development and quality-assurance experts, plus our own high-tech UK manufacturing facility, we can manage the full lifecycle of product creation, from design and prototyping to manufacture and distribution.

We partner with our customers to help deliver scalable, cost-effective, compliant solutions that offer the very best performance, flexibility and reliability.



Over 60 years' experience and technical expertise



Compliance with UK health and safety regulations



Quality and environmental management assured



5,000 sqm high-tech UK manufacturing facility

Find out more

If you're looking for a partner who understands technology – and can offer reliable, cost-effective solutions in high volumes – get in touch.

Call us: [+44 \(0\)115 936 5200](tel:+441159365200) Email us: Info@pressac.com Visit us: www.pressac.com

